DOCUMENT RESUME

ED 353 036 PS 020 736

AUTHOR Tickner, Anne-Marie
TITLE A Study of Attitudes in an All Boys' School.
PUB DATE 92
NOTE 26p.; Master's Thesis, Dominican College.
PUB TYPE Dissertations/Theses - Masters Theses (042)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Academic Achievement; Coeducation; *Elementary School Students; Grade 4; Intermediate Grades; *Males; Private Schools; Sex Differences; *Single Sex Schools; *Social Development; *Student Attitudes

ABSTRACT

This study examined the effect of single-sex schooling on the academic and social development of boys. An extensive literature review presents the conflicting results of studies of various issues related to single-sex education. Subjects of the present study were 39 boys in a fourth grade class at a boys school and 23 boys in a fourth grade class of 43 students at a coeducational school. Subjects completed a questionnaire that measured their attitude toward several aspects of school life. Boys in the boys school expressed a more positive attitude than boys in the coeducational school toward foreign language, information about health, spelling, wood shop, competitive sports, recess, computers, and talent shows. Boys in the coeducational school expressed a more positive attitude toward math problems, world problems, test taking, reports, responsibility in class, recreational sports, social studies, time spent with friends, music, extracurricular activities, field trips, guest speakers, library time, assemblies, and availability of teachers. A list of 15 references is provided. (BC)

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A STUDY OF ATTITUDES IN AN ALL BOYS' SCHOOL

BY

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A Thesis Presented to the Faculty of Dominican College Department of Education in Partial Fulfillment of the Requirements for the Degree of Master of Science in Education: Curriculum and Instruction

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I wish to thank Madalienne Peters, Ed.D. and Barry A. Kaufman, Ph. D. from Dominican College of San Rafael for their support and professional assistance in the preparation of this study. Their insight, knowledge, and belief in me proved invaluable.

I also appreciate the support and assistance of both fourth grade teachers at Town School for boys, Pam Abendroth and Bonnie Bass as well as the fourth grade teachers at San Francisco Day School, Sue Collentine and Sue Marseillas. To my husband, Geoff, I thank him for his patience with my statistics ability or lack there of.

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INTRODUCTION:

Single-sex education programs afford children many advantages they might not have in a coeducational setting. Girls may have opportunities to participate more in school governance, sports, and academic programs with greater frequency than if they attended a coeducational school. The question is whether or not single-sex education is as significant for boys as it is for girls at such an early age.

STATEMENT OF THE PROBLEM:

The purpose of this study is to examine the effect of single-sex (male) schooling upon the academic (cognitive and intellectual) and social affective development of children. Specifically, how does single-sex schooling impact students' attitudes towards school?

RATIONALE:

Gage/Berliner provides a basic introduction to gender differences between boys and girls, the manner in which they behave and how they retain things differently at an

early age. For example, in discussion groups, boys tend to initiate more verbal acts, be more influential and be more task oriented than girls. On tests of intelligence, girls score higher than boys in preschool. This trend is reversed in high school age groups.

In terms of general intelligence though, there is no dramatic difference. Verbally, girls do better at an earlier age and read earlier. In math, boys excel after elementary grades. However, when math is taught in small cooperative groups, girls do better than boys. In an all girls' school where there are no role expectations, girls show higher performance in math and science. Boys are better in their spatial ability and this may be the only trait that is of genetic origin. Boys are more field independent and show more curiosity in risk taking situations. Girls on the average, do better in elementary school than boys, and their achievement is much more stable. Boys are more aggressive than girls throughout their schooling. Of particulary interest is that boys are called on more often than girls and receive more criticism from teachers. Even though the feedback is negative, the teachers are giving more attention to boys.

BACKGROUND AND NEED:

Lee (1986) studied the relationship between single-sex schools and student achievement and attitudes. She found that whether concerning academic achievement, achievement gains, educational aspirations, locus of control, sex role stereotyping or attitudes and behaviors related to academics; results indicate that single-sex schools deliver specific advantages to their students, especially females students. In the recent focus on American education, the relationship between school organization and student's academic performance has been critically examined. What has been considered by some to be an anachronistic organizational feature of schools may actually facilitate adolescent academic development by providing an environment where social and academic concerns are separated. Perhaps a second look in this disappearing school type is warranted (Lee and Bryk 1986). Kraushaar (1972) found that single-sex schools served as a counter cyclical force resisting the rush toward standardization of education.

The purpose of this study is to explore whether or not single-sex education is necessary in the elementary grades, and more specifically, what it does to enhance the attitudes of boys in a single-sex school compared to boys in a coeducational school.

REVIEW OF LITERATURE:

Many studies show that girls do benefit from going to an all girls' school in many areas of their lives. Despite all the studies on single sex girls' schools there have been few on the subject of single sex boys' schools. Clearly, the number of single-sex schools has declined over the years but there might be some significance to separating the boys and girls so they can concentrate on their academics and not be distracted by socializing influences. Traditions of single-sex were based on the idea that student's education and personal growth would be easier when they were not distracted by the opposite sex. Teachers felt they could deal with the special needs of each sex when the schools formed environments especially for boys or girls. Today this form of schooling has been challenged by many educators, for they feel it is not beneficial in many ways to separate boys and girls.

Early warnings about school organization came over two decades ago when Coleman (Jones, 1971) argued that this subculture favors physical attractiveness and heterosexual popularity over academic achievement. He observes that contrary to the popular assumption that it is better for boys and girls to be in school together during adolescence, coeducation may be inimical to both academic achievement

and social adjustment (Jones, 1982). Goodlad also raised doubts about coeducational secondary schooling and encouraged a closer empirical examination of this question (Bauch, 1988)

In talks to parents and teachers, Bettelheim has questioned the prospects of students taking school studies seriously once puberty begins. He recommends separation of the sexes for schooling purposes over the adolescent years. Junior and senior high school students were asked to choose from six selections that they felt were the most popular. "Smart Students" is definitely not the winning category among their peers. At the junior high level, popularity among students resided with "good looking students" and "athletes" (Bauch 1988).

Clearly academics is not the most important factor in school for many adolescents. Many junior and senior high students may not feel strongly about their academic progress and yet take great satisfaction from the athletic ability and relationships with peers. In a study by Jones (1972) when asked how boys would spend a free hour in school if given a free choice, co-ed boys differed significantly ($p < .05$) from boys attending the all boys' school. More co-ed boys indicate that they would spend the time on sports and fewer would spend it on studies.

Boys attending the all-boys' school ranked sports as a means of achieving prestige significantly higher than did co-ed boys. When asked how they would best like to be remembered by their peers, the boys at the all boys' school chose being remembered as a *brilliant student* or a *leader* in school activities. Perhaps the interests appearing to dominate the lives of many young people attending coeducational junior and senior high schools are so reinforced in their out of school lives that they would continue to dominate even in all-girl or all-boy schools (Goodlad, 1984). In single-sex schools the adolescent subculture which includes dating, social life and athletics is most widespread among boys and weakest for girls in single-sex schools. The adolescent subculture has a positive effect for boys on achievment and a negative effect for girls (Bauch, 1988).

American single-sex education is confined almost entirely to the private sector. Over 40% of Catholic high schools are single-sex institutions, of which about 60% are all girls' schools. Religious order schools, especially those for boys, tend to charge higher tuitions and attract more affluent families. Single-sex schools, especially religious order schools, have a greater percentage of teachers with advanced degrees and greater teacher stability of

teachers who are at one school for ten years or more. A stable faculty is one of the major institutional factors with direct effect on student achievement (Bauch, 1988). International studies reveal that students in single-sex schools consistently outperform students in mixed-sex schools in mathematics, science and reading ability. Academic permformances are greater for secondary than for elementary students, with girls outperforming boys. In contrast to this are girls in all girls' schools who differ little socioeconomically from girls in mixed-sex schools and scored better on all cognitive tests, especially those in science. Another interesting point is that all girls' schools have greater discipline in terms of rules and guidelines than all-boys' schools. Male teachers tolerate "restlessness and aggressiveness" to a greater degree and there are not as many male teachers in an all girls' school (Bauch, 1988). Therefore, the female teachers in an all girls' school have stricter discipline compared to the male teachers in all boys' schools. Overall, single-sex schools provide students with a greater number of successful role models of their own sex, greater opportunities for leadership, the ability to raise their self esteem and more importantly, the ability to feel good about themselves.

Self-esteem is the backbone of a child's future. A

favorable opinion of oneself breeds confidence, competence, a willingness to take chances, an ability to stick up for oneself, a healthy respect for others and a sense of responsibility. Low self-esteem is linked to antisocial behavior outside of it, difficulty in adopting to new circumstances and making new friends (Brody, 1991).

Typically the female ego is more fragile than the male and boys show more pride in success than girls do. In research, Lewis (as cited in Brody 1991) has found that boys and girls as young as two years old respond to success and failure differently. When girls fail at a simple task they react with much more shame than boys. Girls who do poorly on a test will allow themselves to have that single performance affect the way they feel about themselves. This may in part be due to the way adults treat them, but Lewis believes that inherent gender differences play a major role (Brody, 1991).

Many times girls do not excel as they might with boys in the class. They feel intimidated and their self-esteem can deteriorate. Therefore, in an all girls' environment girls will not be as intimidated and will be more likely to excell academically. It would seem that the need for an all boys' school would not be as necessary since they already feel confident with the opposite sex in the same setting.

Students electing to attend coeducational schools, as

opposed to single-sex schools, could conceivably differ in ways that are reflected in academic achievement and attitudes. In what Coleman has referred to as "The competion for adolescent energies", scholastic pursuits seem not to fare as well in the coeducational school (Jones, 1971). Adolescence is a critical period for the formation of attitudes about oneself. It may be that some separation of students' academic and social environments removes the distractions that can interfere with the academic development of some students (Lee, 1986). It is true that the aims of schooling are varied, but *academic pursuits* should be among the top of the list.

In general, girls in elementary school have more positive reading habits than boys. In Germany, unlike the United States, most school teachers are male and reading and learning are seen as male appropriate (Finn, 1980). Therefore, boys do better in reading at an earlier age in Germany as compared to the United States. Generally, in science though, boys outperfom girls. Boys have a more positive attitude for science but girls' attitudes towards science are enhanced when they are in an all girls' school. Usually the staff in all boys' schools tends to have more male teachers and for an all girls' school the teachers tend to be female. Sex roles are being modeled for the students and that is vital to their success (Finn, 1980).

There have been several studies done on the attitudes of students in a coeducational high schools compared to those in a single-sex high school. The studies are conflicting but point out interesting issues in keeping the single-sex schools as an option for children. Lee (1986) proposed that students' perception of the school's environment was generally a friendlier and more relaxed atmosphere at a coeducational high school. She also found that boys in all boys' schools took more math and science courses and fewer vocational and social science courses. In general, the boys at an all boys' school showed higher achievement levels than their counterparts in a coeducational school. Along with this, they also had a greater desire for educational aspirations, higher sense of control and better self-concept. The staff at an all boys' school had more resources, as measured by percentage of faculty with advanced degrees, low teacher turnover and high teacher stability rates. Boys' schools also had the highest per pupil expenditure (Lee, 1986). The study in general reported a significant difference in effect of single-sex schools, stronger for girls than for boys.

In contrast to this study, Marsh (1989) came to different conclusions than from the study done by Lee (1986). In his study he stated that boys benefit more

from single-sex schools than did girls. He found that girls get better grades, but boys score higher on standardized tests. Compared to boys in coeducational schools, boys from single-sex schools were favored academically across the board.

Lee, (1990) followed up the 1986 study and studied attitudes of single sex students 2 to 4 years after high school. She also studied single-sex colleges and found that students' performance varies in terms of outcomes. They show a pattern of effects that is almost universally positive. There was greater academic involvement, more interaction with faculty, higher intellectual self-esteem and greater satisfaction with college life overall for men, except in social relationships. For women, she also found there was a greater verbal aggressiveness. In terms of attitudes for young men who had attended single-sex schools, there was no significant positive effect on college attitudes and values. There were two major negatives though, which she found startling. One was that boys from single-sex high schools were less likely to show *concern* for social justice. This was ironic, for they had specific courses on this in high school. Also, upon graduating from college, they were less satisfied with nonacademic aspects of their colleges.

With both males and females coming from single-sex high schools, they attended more selective colleges. This study, along with (Lee, 1986) also concluded that single sex schools in general were more empowering for girls than for boys.

Riordan (1985) compared single-sex Catholic schooling to coeducational Catholic schooling. He found that Catholic single-sex schooling was better for males than coeducational schooling. Single-sex schools have a greater emphasis on affiliation. There are fewer non-academic distractions and fewer problems of discipline and control. His specific aim was to demonstrate that students at Catholic single sex-schools perform higher academically than students from Catholic coeducational schools. He refers to Lockheed (1976) who concluded that co-ed schools negatively affect boys in the early grades and negatively affects girls in intermediate and secondary grades.

Trickett (1982) studied the effects of classroom environments between single-sex schools and coeducational schools. In general, the classrooms in independent schools were rated higher than public classrooms on student involvement, student affiliation, teacher support, task orientation, order and organization.

Single-sex classrooms appeared in general to be more organized and structured. Students attending single-sex schools spent more time on homework after school and on weekends. They also spent less time on extracurricular activities and had less free time in general. It is apparent that socialization influences differ greatly among these schools. Students attending single-sex schools reported that the academic reputation was the most important factor in deciding which school to attend. Also with their peers, they wanted to be remembered as a "good student". Academics clearly takes priority over socializing in single sex schools, whereas in co-ed schools socializing is the main focus of the majority of the students.

Hawley (1992) who is Headmaster at University High School in Cleveland wrote an essay revealing many positive aspects to a single-sex education for boys. Hawley observed that boys reveal a number of gender specific contours in their skeletal, motor and neurological development. Boys in general develop language skills, capacity for quantitative analysis and large and small muscle proficiencies at a different tempo from girls. Girls skeletons and nervous systems at birth are more developed than those of boys and this gap increases through childhood. Women develop fine motor skills

earlier and men develop large motor skills sooner (Hawley, 1992). Therefore, if the learning style and tempos of men and women are at a variance; a homogeneous school program will miss either the masculine or feminine mark. For deep biological reasons, schooling pubecent boys and girls together produces inequitable distractions. Expressed or suppressed sexual distraction is an undeniable impediment to focused activity, learning and development. Hawley (1992) cited Austin who attributed the positive effects of single-sex college to restricted heterosexual activity. He concluded that there seems to be no evidence that the experience of boys and girls together during school hours contributes positively either to cross-gender socialization or to learning. Preadolescent children given the chance and mobility to do so, exhibit a tendency to seek our their own gender for group activity despite their placement in co-ed settings from preschool years onward. Hawley believes there might be demonstrated, a shadowy boys' school and girls' school underlying every coed school.

Hawley (1992) noticed at an all boys' school an unaffected directness, and authenticity he had not experienced in a school before. He found a special edge, positive to their schooling. There were high goals set by the boys for intellectual, athletic and artistic performance.

He felt the boys were self directed, resourceful and that a single-sex education for boys is a positive one.

In a climate of extreme opinions, it is important to study the effects of single-sex education for both boys and girls. Clearly there has been more research done on the affect of single-sex schooling for girls. The majority of the studies concerning single-sex girls' schools have shown positive effects for girls. The handful of studies concerning the effects of single-sex boys' schools on the whole has not been as positive.

The purpose of this study is to compare the attitudes of boys towards school in a single-sex school to the attitudes of boys in a coeducational school.

METHOD

Subjects

Sixty-two students were studied from two private elementary schools in San Francisco, California. The study was conducted in the fourth grade in both schools. School A which is a single-sex boys' school had thirty nine boys in the class. School B which is a coeducational school had twenty three boys and twenty girls in the fourth grade class. For this study, only the boys responses were used

for school B. They were asked to answer a questionnaire of twenty nine questions reflecting their attitudes towards many aspects of school life. The scale rated responses from 1 to 5; 1 being disliking very much and 5 being liking very much.

PROCEDURE

Data were analyzed and means and standard deviation were calculated based on the twenty nine questions asked of the boys. The Pearson R statistic was used to show the strength of the relationship and verified that there was no great statistical significance.

RESULTS AND DISCUSSION

The total mean of class A was 3.91 and the total mean of class B was 4.09 showing on the whole that class B had a better attitude towards school. Class A had a Standard Deviation of .60 and class B had a Standard Deviation of .33 which shows a greater rate of variability for Class A.

Insert Table 1 about here

SUMMARY

The results of this study supported many of the studies done thus far on single-sex education for boys. What was found was that a single-sex school setting for boys *does not* necessarily enhance his attitude towards many aspects of school in general. Where the boys' attitudes proved to be better in the single-sex school than in the coeducational school were in the following subjects: Foreign language, health facts, spelling, wood shop and construction, competitive sports, recess, computers, and talent shows. The attitudes towards school in the coeducational school proved to be greater in the following subjects: solving problems in math, personal and world problems, having longer periods to do things more thoroughly, taking tests, giving reports, responsibility and special jobs in class, letting classmates talk and move around as much as they like, pleasure recreational sports, social studies, time with friends, music, extra curricular activities, fieldtrips, outside speakers, library time, time for sharing current events, assemblies, and the availability of teacher to talk to when necessary. Although the statistical significance is slight between the attitudes of the boys in each of these schools, there is a stronger positive attitude towards school from the coeducational school.

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TABLE 1

	Class A Mean	Class B Mean
1. solving problems in math	3.15	3.58
2. Foreign lanquage	3.04	2.79
3. health facts	3.65	3.54
4. personal and world problems	3.16	3.87
5. spelling	3.86	3.29
6. creative writing	4.39	4.54
7. creative art	4.12	4.58
8. woodshop and construction	4.42	4.36
9. Longer periods to do things thoroughly	3.62	4.00
10. taking tests	3.21	3.25
11. giving reports	3.57	4.04
12. responsibility and special jobs in class	3.83	3.96
13. elected officers for class	4.00	4.16
14. letting classmates move and talk a lot	4.09	4.29
15. sports - competitive	4.61	4.20
16. pleasure recreational sports	4.35	4.76
17. social studies	4.02	4.08
18. time with friends	4.79	4.87
19. recess	4.61	4.56
20. computers	4.5	4.45
21. music	3.43	4.08
22. after school programs	4.00	4.12
23. fieldtrips	4.17	4.58
24. outside speaker	3.97	4.00
25. library	3.87	4.30
26. time for sharing current events	3.59	4.52
27. assemblies	3.42	3.64
28. talent shows	4.02	4.00
29. availability of teachers to talk to	4.07	4.22
MEAN OF MEANS	3.91	4.09

TABLE 2

	Class A Standard Deviation	Class B Standard Deviation
1. Solving problems in math	1.19	1.19
2. personal and world problems	1.20	1.03
3. creative writing	.61	.77
4. sports - competitive	.66	1.35
5. computers	.87	.90
Total Standard Deviation for the 29 questions.	.60	.33